



NTSB National Transportation Safety Board

Office of Highway Safety

Driver Factors and Collision Warning Systems

Introduction

- Driver factors
 - Freightliner, specialty bus
- Collision warning systems
 - NTSB actions
 - NTSB recommendations status

Truck Driver's Qualifications

- Valid Class A CDL, corrective lenses restriction
- Glasses in use
- Valid medical certificate
- 13 years experience

Bus Driver's Qualifications

- Valid Class B CDL, no restrictions
- Expired medical certificate
- Medically recertified following accident
- Diabetes well controlled by diet, medication
- 6.5 years experience

Driver Factors

- Freightliner driver
 - On duty 9.5 hours
 - Normal sleep pattern, well rested
- Specialty bus driver
 - On duty 8.5 hours
 - Normal sleep pattern, well rested
- Toxicological examinations
 - Negative for alcohol, drugs

Precollision Conditions

- Bright sun, above and behind
- Bus brake lights illuminated
- Degraded brake light contrast unlikely
- No collision warning system

Profile of Rear-End Crashes

- One-third of all highway crashes
- 90% involve driver inattention
- 12% of multivehicle crashes are fatal
- 40% of fatal crashes involve commercial vehicles

Capabilities of CWS and ACC

- Collision warning system (CWS)
 - Detects slowed, stopped objects ahead
 - Alerts the driver to take action
- Adaptive cruise control (ACC)
 - Detects slowing vehicles ahead
 - Cruise control in use
 - Automatic throttle closure, engine braking

NTSB Actions

- 1995 accident investigation
 - Recommended truck CWS testing
 - *Closed – Unacceptable Action* in 1999
- 1999 public hearing
 - Advanced safety technologies
- 2001 special investigation report
 - 9 rear-end crashes, 20 fatalities

NTSB Recommendations

H-01-06

- Complete CWS, ACC rulemaking

H-01-07

- Require CWS in new commercial vehicles

Action by NHTSA

- July 2005 response to NTSB
- Completed CWS, ACC field testing
- Evaluating test data
- Classified as *Open – Acceptable Response*
- Report not published in 2005
- Anticipated in May 2006



NTSB